

Prosodic Focus Marking in Ewe?

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1. Introduction
 - 1.1 Structure of the Talk
 - 1.2 Motivation
 - 1.3 Focus Expressions in Ewe
2. Methods
 - 2.1 Materials
 - 2.2 Recording Procedure
 - 2.3 Acoustic Analysis
3. Data
 - 3.1 Duration
 - 3.2 F0
4. Conclusions

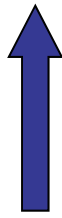
“Different languages employ different means for the formal expression of focus.

Thus focus may be signaled **prosodically** by stress as is the case in **English**.

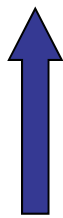
Some languages express focus **morphologically** by means of special morphemes and particles. This is the situation in many African languages including **Ewe** and Akan.”

(Ameka 1992: 3)

Questions:



Does Ewe also use prosodic means to express focus?



If yes, which kinds of prosodic means are used?

Hints for prosodic focus marking in the literature:

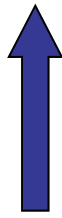
1. Möhlig (1971)

Ewe uses „expressives prosodemes“: one of them, for instance, serves to emphasize a word or phrase by a higher realization of all high tones in the respective phrase

2. Lefebvre/Brousseau (2002:154) (on Fon)

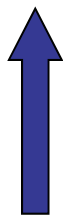
If the focussed element “is linked to the direct object position of the verb[. T] there is a short pause after [the focus marker] wè...” But if the focussed element “is linked to the subject position of the verb. (...), there is no pause between wè and the verb, ...”

Questions:



Does Ewe use prosodic means to express focus?

➤ maybe?!



If yes, which kinds of prosodic means are used?

- F0-modulation
- phrasing (pauses, lengthening etc.)

Based on the literature, it seems that the pragmatic category ‘focus’ is mostly expressed by morpho-syntactic means.

(e.g. Ameka, 1992)

Focus on the subject

[S-é]_{Foc} V O

Focus on the object

S V [O]_{Foc}

[O-é]_{Foc} S V

1. **nyónū nyá āmē.**
woman know person
'A/the woman knows the/a person.'
2. **nyónū nyá mǎá.**
woman know way.DEF
'A/the woman knows the way.'
3. **māmá nyá mǎá.**
grandma know way.DEF
'A/the grandmother knows the way.'
- H nonH # H # nonH nonH
H nonH # H # H H
nonH H # H # H H

4. **nyónū** **dù** **núwó.**
woman eat thing.pl
'A/the woman has eaten things.'

H nonH # nonH # H H

5. **āmē** **dù** **àgbè.**
person eat life
'A/the person has enjoyed life.'

nonH nonH # nonH # nonH nonH

6. **māmá** **dù** **àgbè.**
grandma eat life
'A/the grandmother has enjoyed life.'

nonH H # nonH # nonH nonH

1. Focus on the subject (42 utterances)

Q: Who knows the person?

A: S + FM V O
nyónū é nyá āmē.

2. Focus on the object (ex-situ) (39 utterances)

Q: Whom does the woman know?

A: O + FM S V
āmē é nyónū nyá.

3. Focus on the object (in-situ) (36 utterances)

Q: Whom does the woman know?

A: S V O
nyónū nyá āmē.

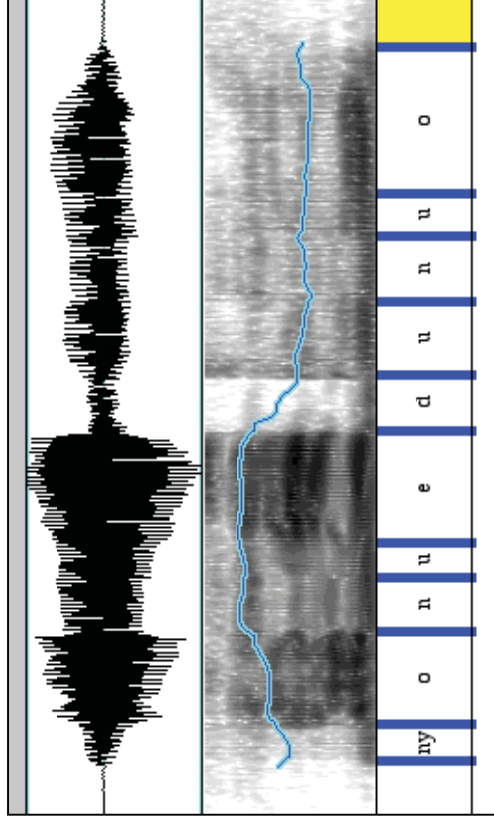
Recordings were made:

- in a sound attenuated recording booth
- with one male educated speaker of English
- at 44Khz in digital format
- reading lists (question-answer paradigms):
recorded (at least) five times, each time in a different
randomized order → at least five tokens per sentence type

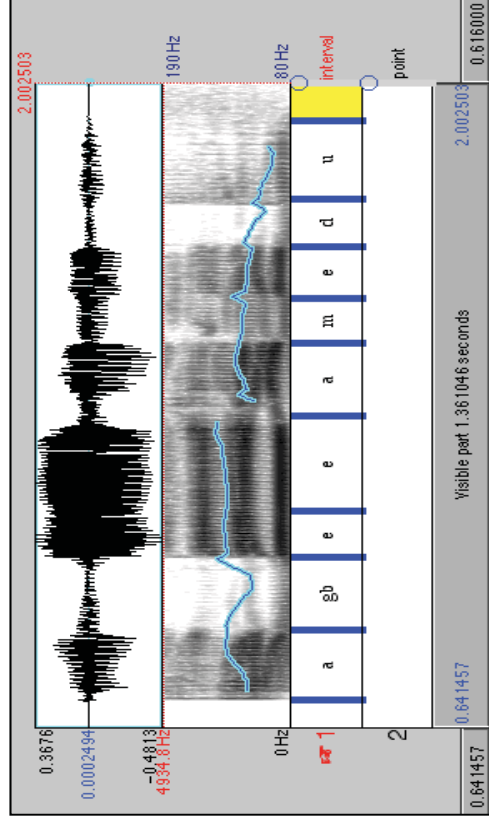
6 sentences x 3 conditions x at least 5 repetitions > 90

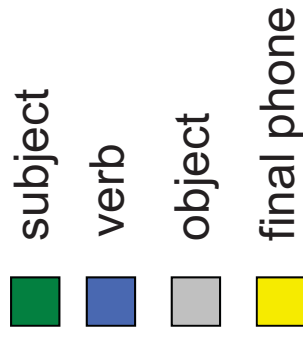
For these utterances

- the speech stream was annotated phonemically in Praat
- the duration of each phoneme was calculated via a script
- the F0 was calculated and time-normalized via a script

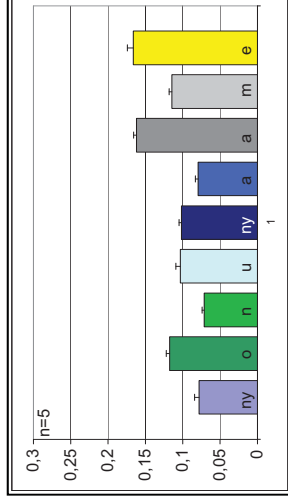


Sample of Praat Labeling
 file:
 Sound pressure wave form
 Spectrogram with overlaid
 fundamental frequency (F0)
 contour
 segmentation window with
 transcription



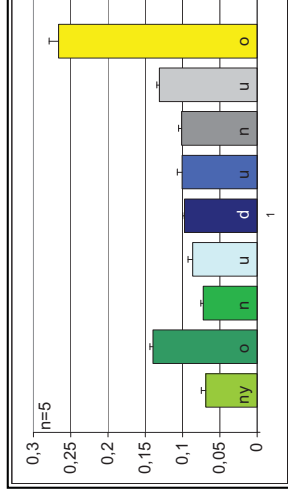


1.



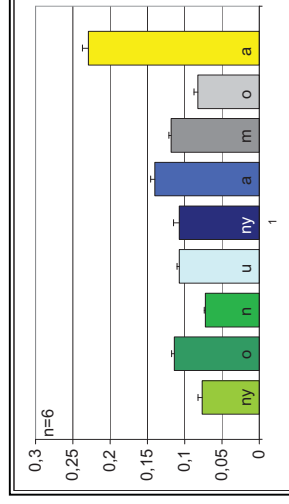
nyónū nyá āmē.

4.



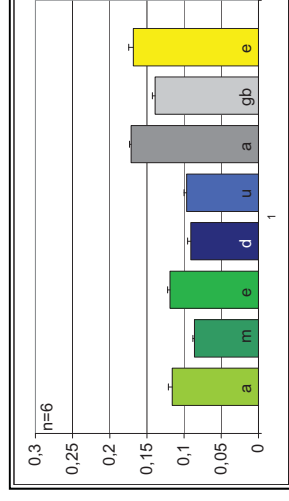
nyónū dū núwó.

2.



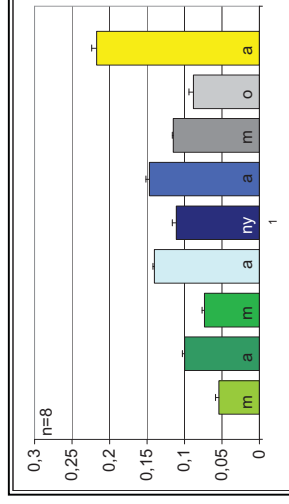
nyónū nyá móa.

5.



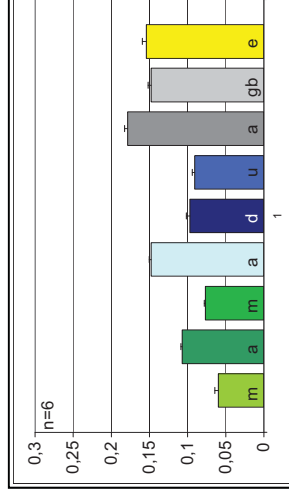
āmē dū àgbè.

3.



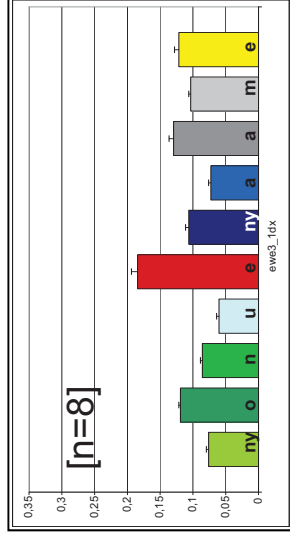
māmá nyá móa.

6.



māmá dū àgbè.

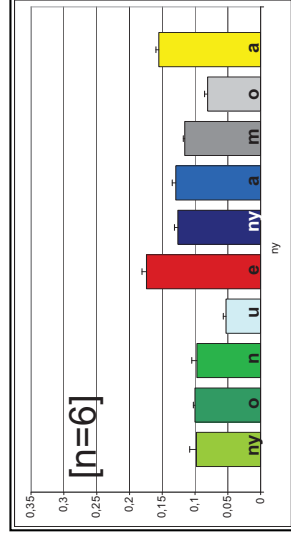
1.



nyónnū é nyá āmē.

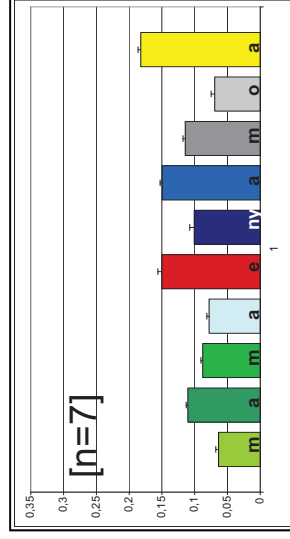
subject
FOC marker
verb
object
final phone

2.



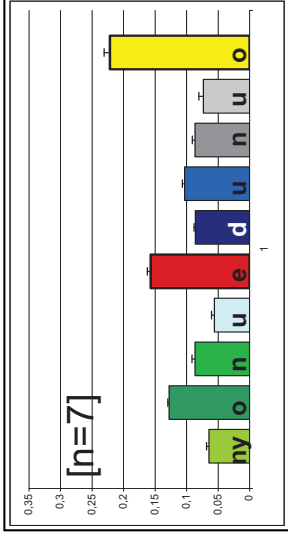
nyónnū é nyá āmē.

3.



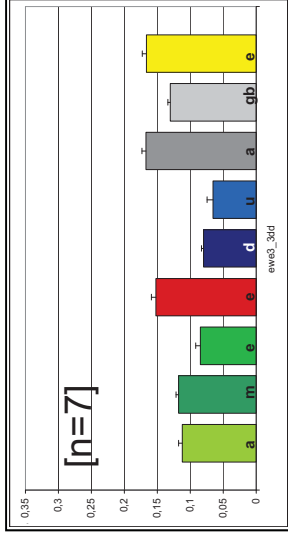
māmā é nyá mōá.

4.



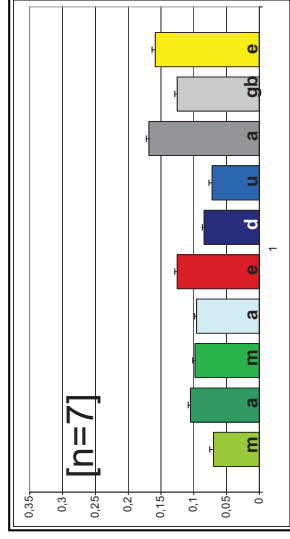
nyónū é dù núwó.

5.



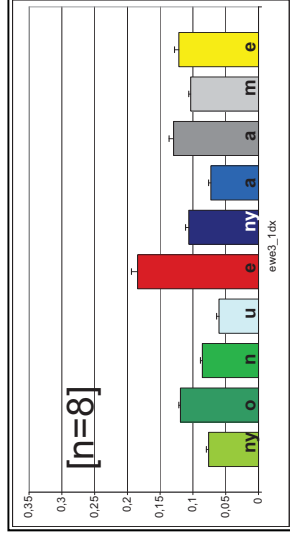
āmē é dù àgbè.

6.



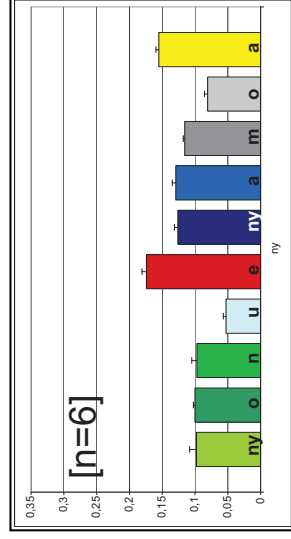
māmá é dù àgbè.

1.



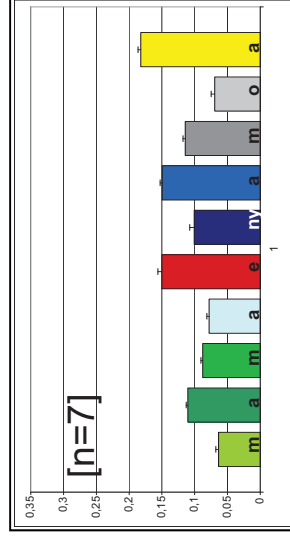
nyónnū é nyá āmē.

2.

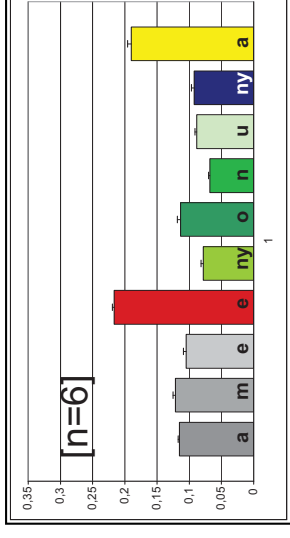


nyónnū é nyá āmē.

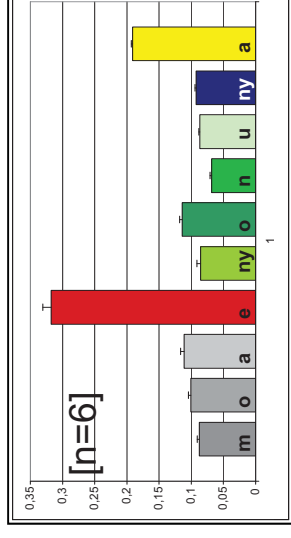
3.



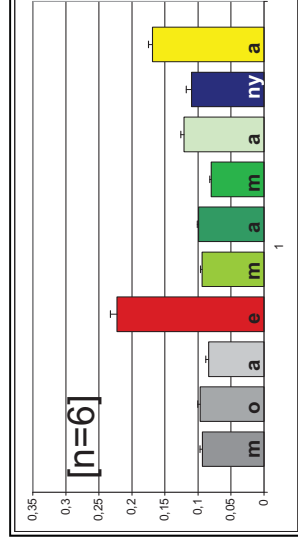
māmā é nyá mósá.



āmē é nyónnū nyá.

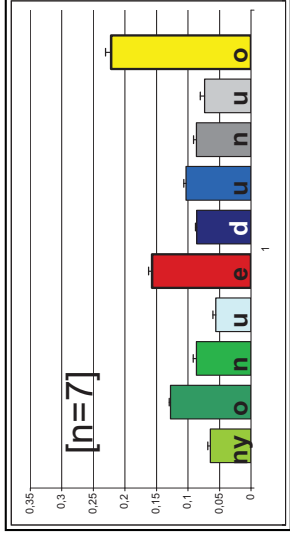


mósá é nyónnū nyá.



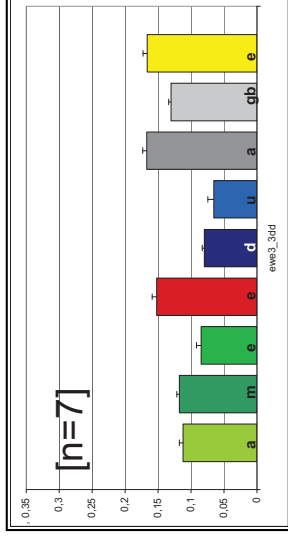
mósá é māmā nyá.

4.



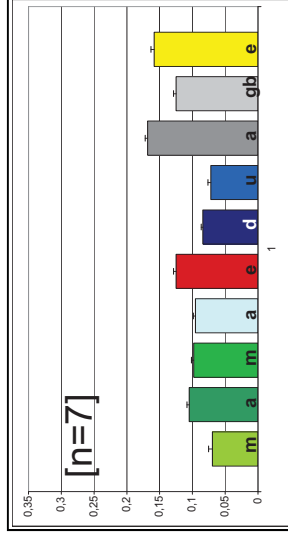
nyónū é dū núwó.

5.

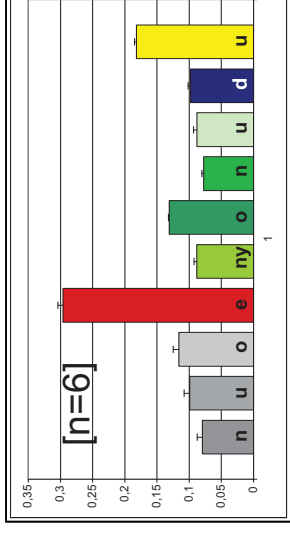


àmē é dū àgbè.

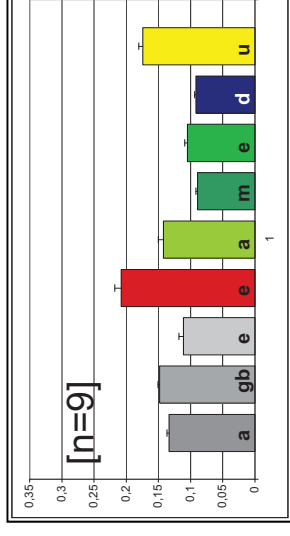
6.



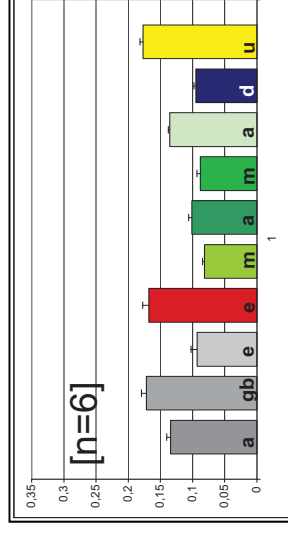
māmá é dū àgbè.



núwó é nyónū dū.



àgbè é àmē dū.

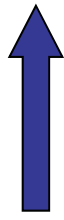


àgbè é māmá dū.

A *Linear Mixed Effects Model Anova* on the duration of the Focus Marker in **S+FM** versus **O+FM** shows a significant effect:

$$p.< .05, df=1, F=15.77$$

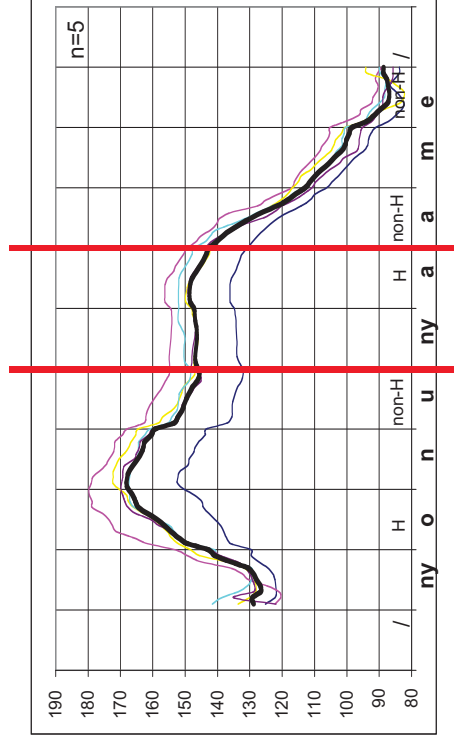
The focus marker in the ex-situ object **O+FM** is produced reliably longer by this speaker than in the **S+FM** condition.



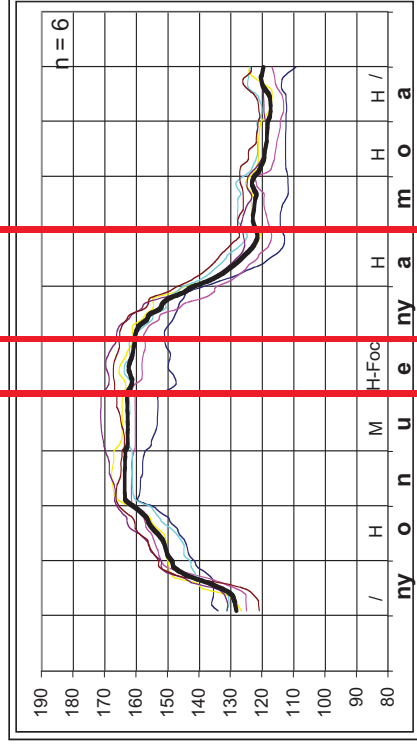
S-Foc: lengthening as indicator for focus

O-Foc: lengthening as indicator for clausal
boundary and focus
(compounding effect)

Object Focus no Marking



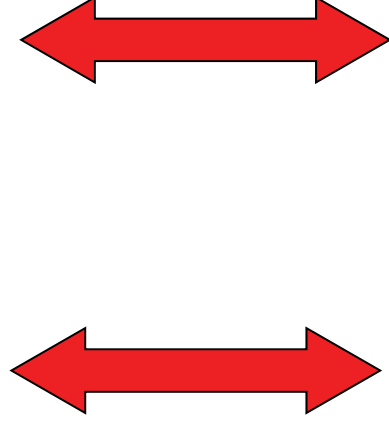
Subject Focus (with FM)



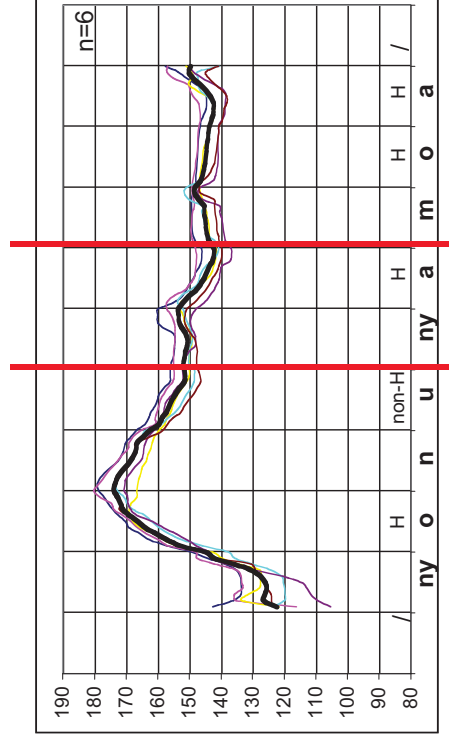
Time-normalized F0 contours

x-axes: phonemes
y-axes: F0

nyónú é nyá móá.

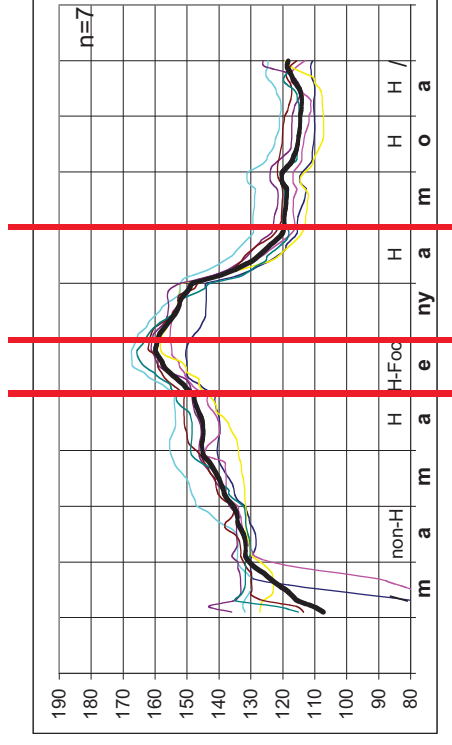


Object Focus (no Marking)

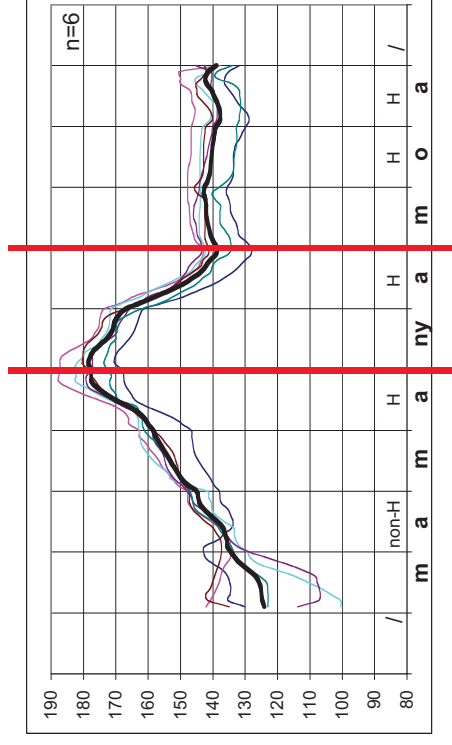


nyónú nyá móá.

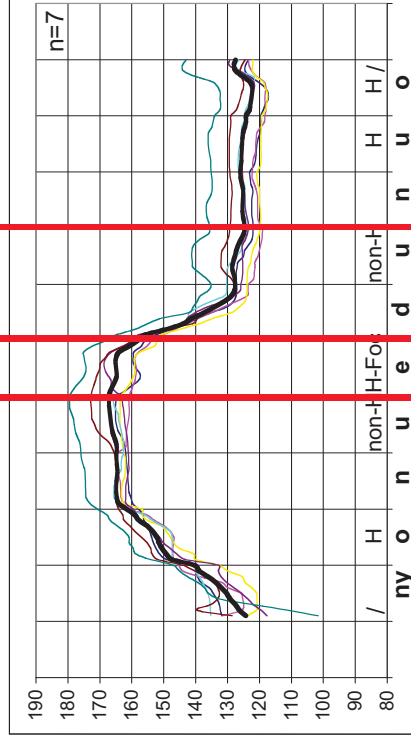
Subject Focus with Marking



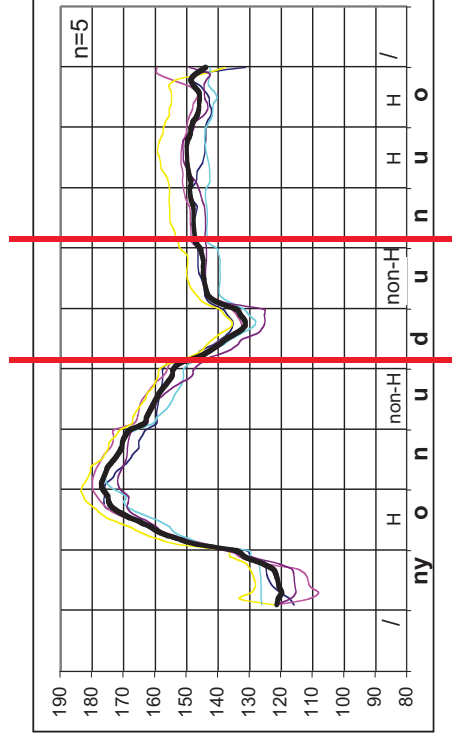
Object Focus no Marking



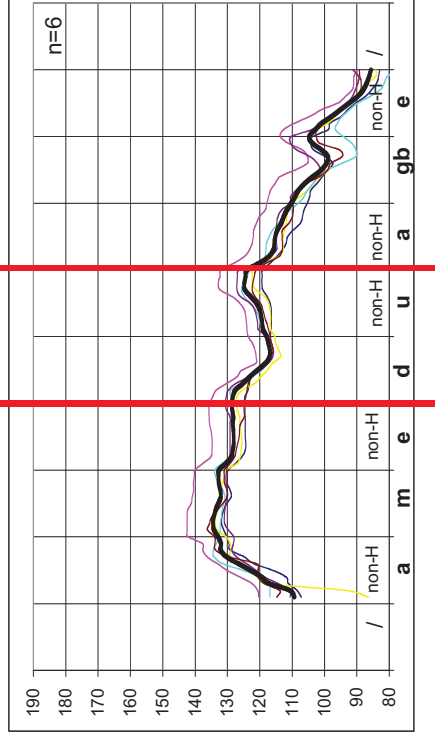
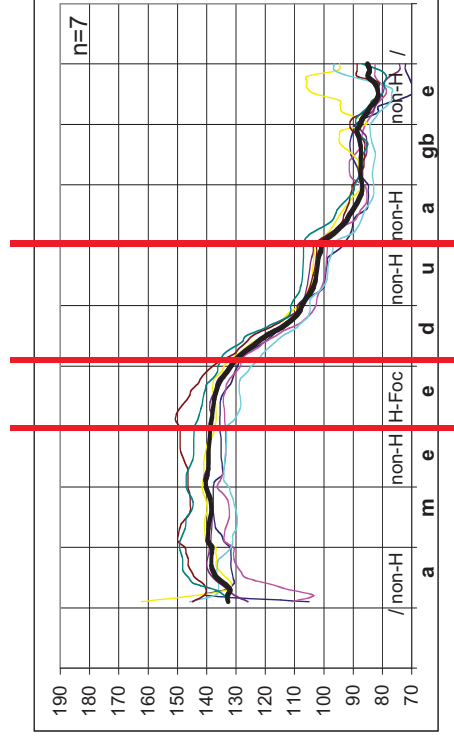
Subject Focus with Marking



Object Focus no Marking

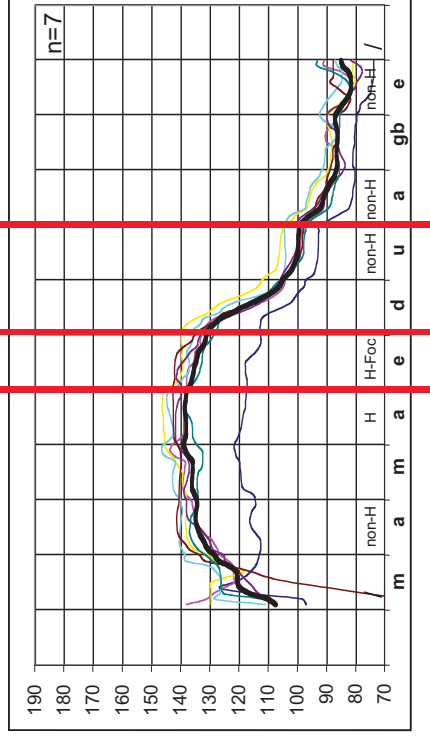


Subject Focus with Marking

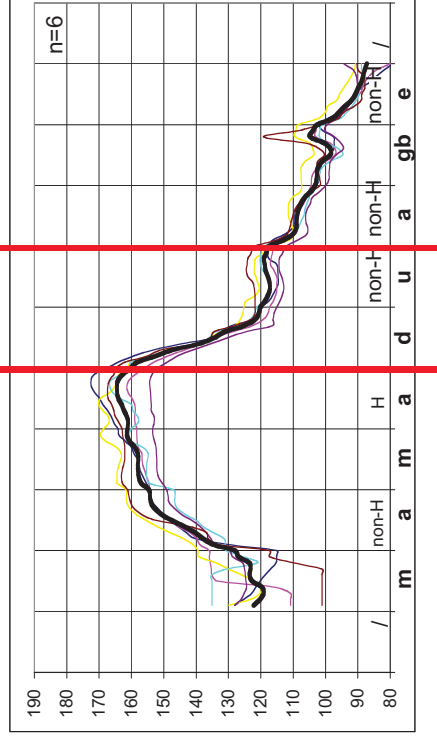


Object Focus no Marking

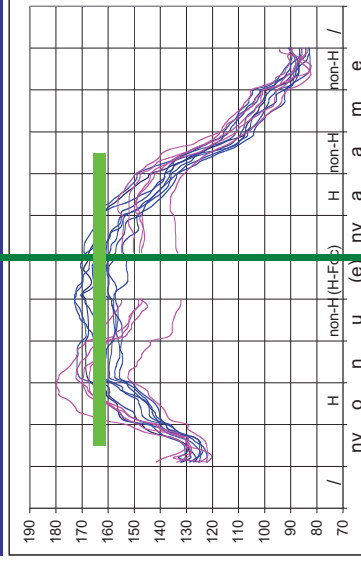
Subject Focus with Marking



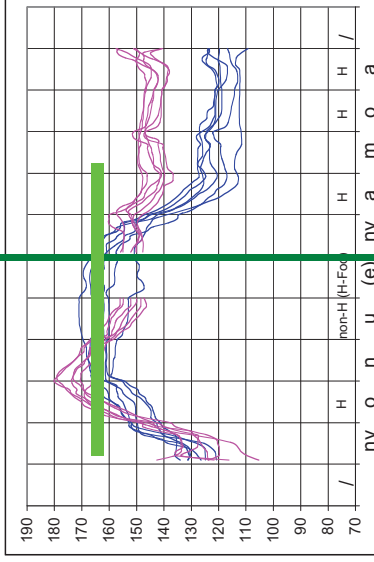
Object Focus no Marking



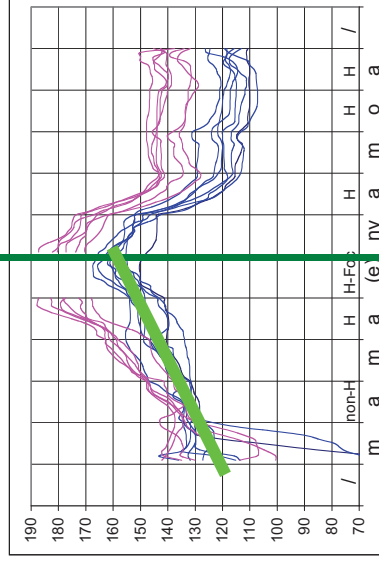
F0 – Comparison: O-Foc in-situ vs. S-Foc



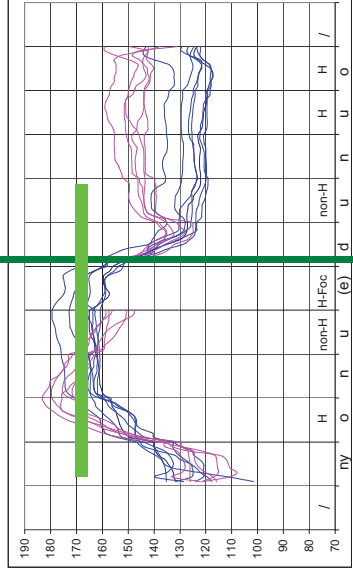
nyónū nyá āmē.
VS.
nyónū é nyá āmē.



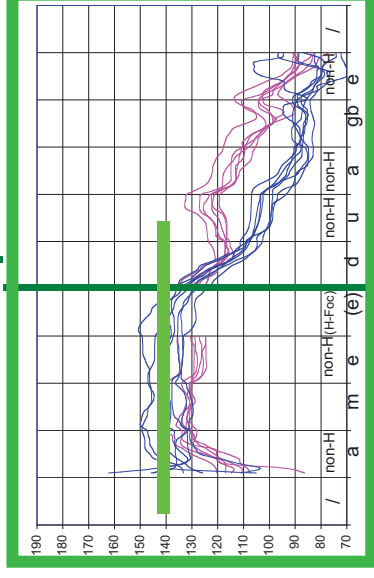
nyónū nyá móa.
VS.
nyónū é nyá móa.



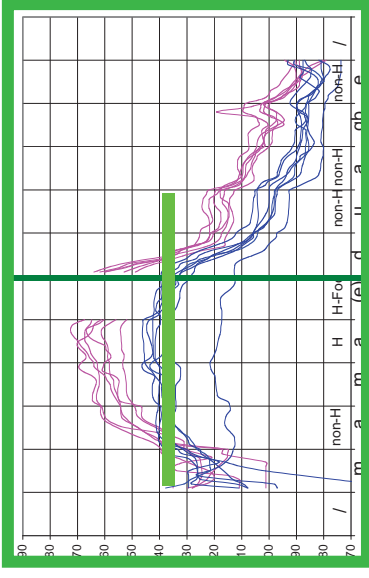
māmá nyá móa.
VS.
māmá é nyá móa.



nyónū dù núwó.
VS.
nyónū é dù núwó.

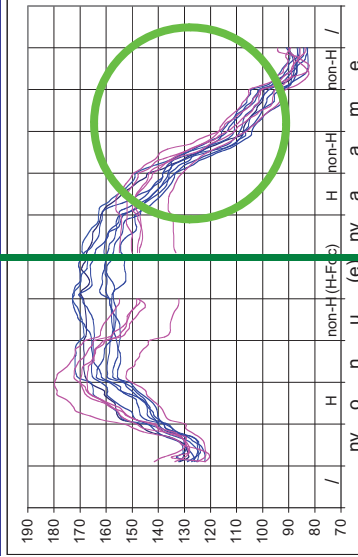


āmē dù àgbè.
VS.
āmē é dù àgbè.

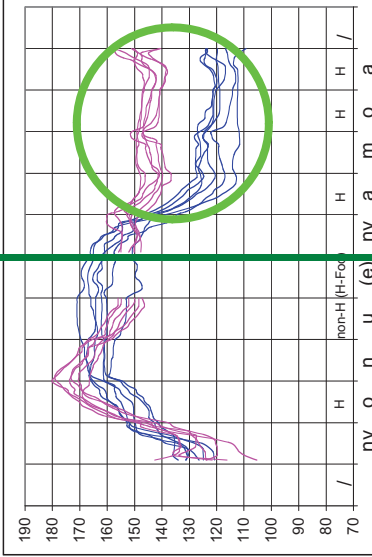


māmá dù àgbè.
VS.
māmá é dù àgbè.

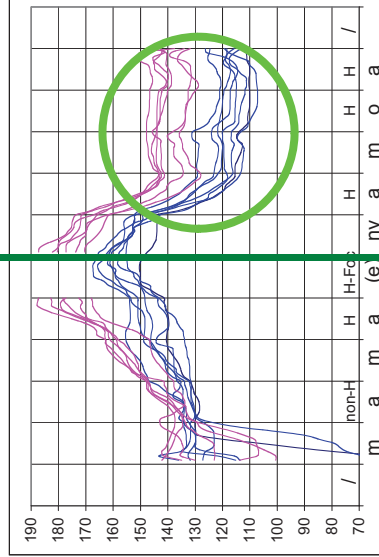
F0 – Comparison: O-Foc in-situ vs. S-Foc



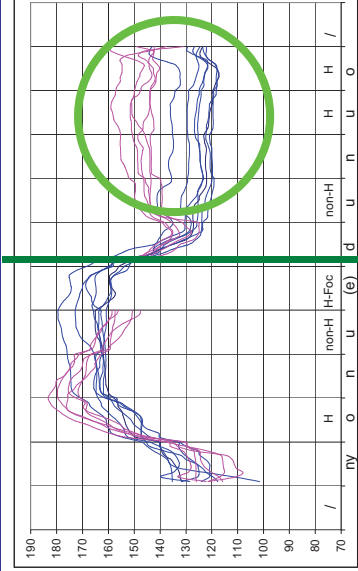
nyónū nyá āmē.
VS.
nyónū é nyá āmē.



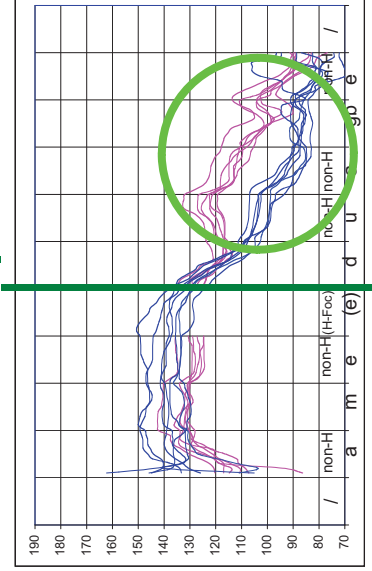
nyónū nyá mǎá.
VS.
nyónū é nyá mǎá.



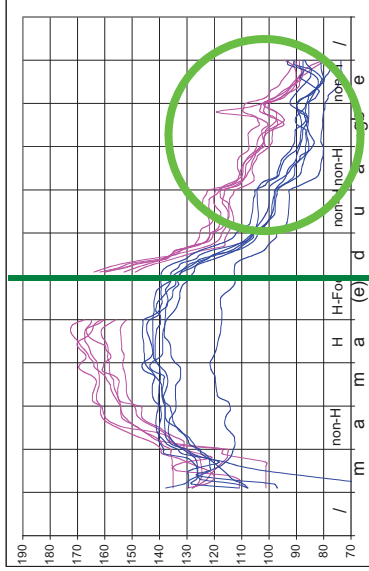
māmá nyá mǎá.
VS.
māmá é nyá mǎá.



nyónū dù núwó.
VS.
nyónū é dù núwó.

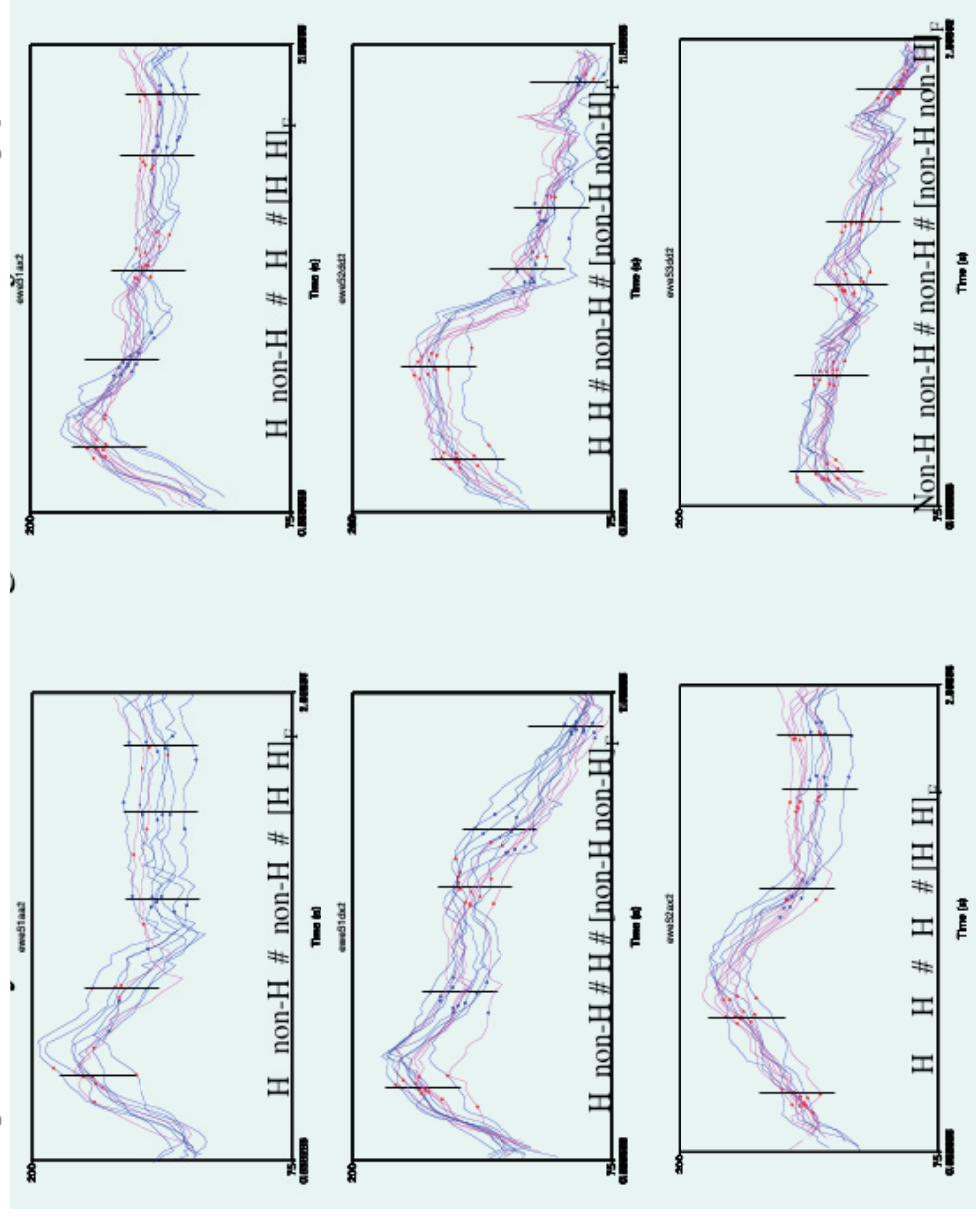


āmē dù àgbè.
VS.
āmē é dù àgbè.

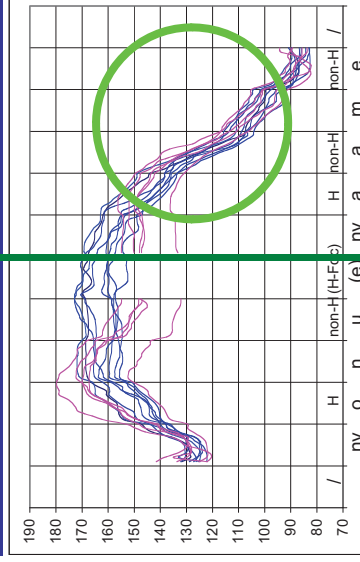


māmá dù àgbè.
VS.
māmá é dù àgbè.

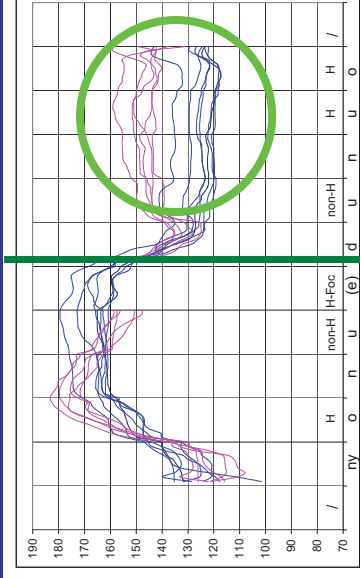
Overlay of neutral reading & Object focus in-situ for six sentence types



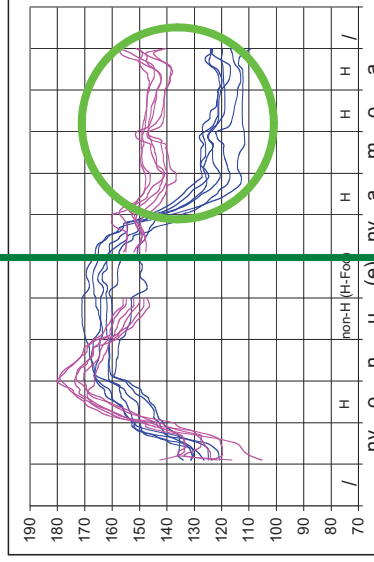
F0 – Comparison: O-Foc in-situ vs. S-Foc



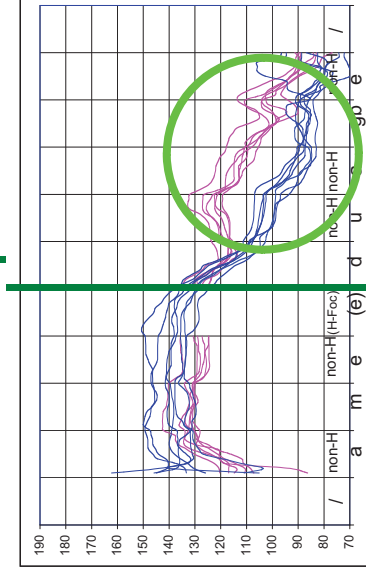
nyónū nyá āmē.
VS.
nyónū é nyá āmē.



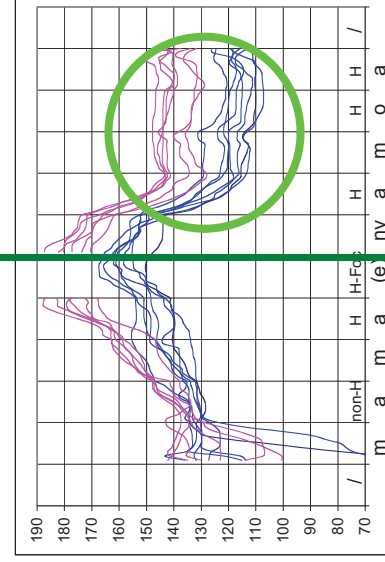
nyónū dù núwó.
VS.
nyónū é dù núwó.



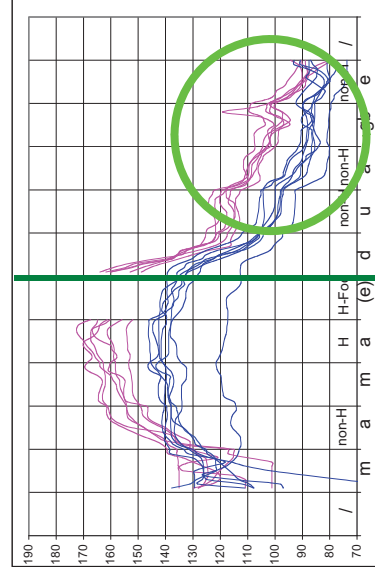
nyónū nyá mǎá.
VS.
nyónū é nyá mǎá.

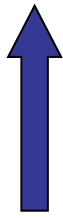


āmē dù àgbè.
VS.
āmē é dù àgbè.



māmá nyá mǎá.
VS.
māmá é nyá mǎá.





Does Ewe also use prosodic means to express focus?

Yes!

There is evidence for **duration** (lengthening of FM) to play a (tertiary) role, supporting syntactic structure.

S_{Foc} | V O

O_{Foc} | S V

There is evidence for **F0** (compression of postfocal material) to play a (secondary or tertiary) role.

	[S-é] _{Foc} V O	S V [O] _{Foc}	[O-é] _{Foc} S V
Syntax	?	-	✓
Morphology	✓	-	✓
Phonology: duration F0	✓ ✓	- -	✓ ?

	[S-é] _{Foc} V O	S V [O] _{Foc}	[O-é] _{Foc} S V
Syntax	?	-	✓
Morphology	✓	-	✓
Phonology: duration F0	✓ ✓	- -	✓ ?

	[S-é] _{Foc} V O	S V [O] _{Foc}	[O-é] _{Foc} S V
Syntax	?	-	✓
Morphology	✓	-	✓
Phonology: duration F0	✓	-	✓
	✓	-	?

Intro
Methods
Data
Conclusions

Thank you!

Dr. Stefanie Jannedy

Project D3 „Signal Parameters Connected to Prominence and Phrasing within Spoken Utterance in Different Languages“

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Germany

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<http://www.sfb632.uni-potsdam.de/>

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